REMARKS

Claims 3-8 were rejected as unpatentable over ELASSAAD et al. 2004/0257207 in view of PORTERFIELD 6,588,001 and KUMAMOTO 4,695,748. Reconsideration and withdrawal of the rejection are respectfully requested.

One of skill in the art would not combine KUMAMOTO with the other references because the proffered motivation for doing is unrelated to repeaters.

The claims are directed to the repeaters in a signal transmission line. Each of the repeaters has first and second logic gates (with an inverting function) arranged in order along the direction of signal transmission in a signal transmission line. The first logic gate has a higher current driveability than that of the second logic gate.

ELASSAAD et al. and PORTERFIELD discuss repeaters but, as acknowledged in the Official Action, do not disclose that the first logic gate has a higher current driveability than that of the second logic gate.

The background of the present application cites JP-A-2001-290854 that discloses two cascaded inverters in a signal transmission line (page 4, beginning at line 9). As thoroughly explained therein, the arrangement of this admitted prior art (APA) includes cascaded inverters where the driveability of the inverters is opposite that claimed (page 5, lines 19-22); in

other words, in the APA the second logic gate has a higher current driveability than that of the first logic gate.

Thus, if one of skill in the art had before him ELASSAAD et al., PORTERFIELD, and the APA (all three related to the repeaters), there would be no suggestion to change the driveability of the cascaded inverters from that of the APA.

The Official Action now adds KUMAMOTO to these references, and suggests that this reference offers motivation to overturn the APA. First, it is noted that KUMAMOTO is unrelated to repeaters. The reference discloses a comparing device that has no use in a repeater. One of skill in the art would not turn to a reference that discloses a comparing device when considering improvements to a repeater. As explained in the present application, a repeater is used in a signal transmission line to reduce propagation delay (page 1, line 24-25), and propagation delay increases in proportion to the product of line resistance and line capacitance. Comparing voltages is not a factor.

Further, the motivation offered to combine KUMAMOTO with the other references is not relevant. KUMAMOTO discloses that a current-driven capacity of a first of cascaded inverters is larger than that of a second of the cascaded inverters "so that a difference between the voltage to be compared (Vin) and the reference voltage (Vref) can be detected precisely at high speed" (Abstract). The Official Action states that one of skill in the art would arrange the inverters as suggested in KUMAMOTO

to provide a repeater that can detect an input voltage precisely at high speed. While this may be important in comparators, detecting input voltages precisely at high speed and comparing voltages are simply not considerations in repeaters. The issue in repeaters is reduced line capacitance, not voltage detection.

In addition, the motivation offered in the Official Action ignores other, more pertinent teachings. Implicit in the application of KUMAMOTO against the claims is the assumption that the reason offered in KUMAMOTO for arranging the inverters in this way is superior to the reason offered in the APA for NOT arranging them in this way. However, there is simply no basis for this assumption. The teachings of the APA directly relate to repeaters and represent, as best understood, what is actually being done by those in the art today. Nothing in KUMAMOTO indicates why the APA is no longer good technology and should be ignored. Indeed, the APA should not be ignored; it is KUMAMOTO that should be removed from consideration and this is respectfully requested.

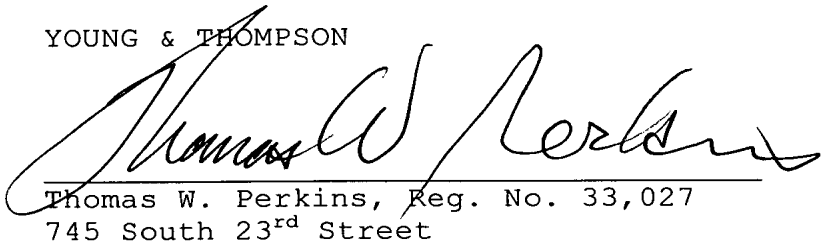
Claim 9 has been added and is allowable for the reasons given above. Claim 9 specifically includes inverters, rather than logic gates with a logic inverting function.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



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